

SOME PHYSIOLOGICAL PARAMETERS AND ENZYMATIC ACTIVITIES EVOLUTIONS REPORTED TO THE TRAINING SCHEDULE STAGE IN SPORT HORSES

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SUMMARY

The paper is a reference study in view to have a solid base in evaluation, for the adequate protection of health and welfare of the jumper horses' competitors (1, 2). Training schedules structure for the sport horses generally, and particularly for jumpers, it is a high quality gradually works on specific elements in view to obtain a well-trained individual (3). The constant and correct work, develop the neurological and muscularly system and improve the horse behavior by modeling his character. To determine whether a clinical examination was adequate to assess the fitness, and to characterize the relationship between a clinical assessment of the horse's fitness, training schedule stage and its physiological parameters and enzymatic activities, 22 horses (12 RSH and 10 ThH) were monitored before (S_1), during training, immediately after warming-up (S_2) and after an E level (100 cm height and 120 cm large) fence obstacle course (S_3). The arena was covered by grass, and the outside temperature measured 25–30°C. The blood samples were taken from the jugular vein in the mentioned phases, for the determination of GOT (U/L), GPT (U/L) and CPK (U/L). At the same moments were determined the cardiac (beats/min.), and respiratory frequency (cycles/min.) and the body temperature (°C). The initial cardiac frequency was 33.75 (RSH) and 32.10 (ThH) beats/ min. The S_3 values were three times higher, that determined statistically significant differences at $p < 0.001$. Looking to the respiratory frequency (13.05 for the RSH and 12.50 for the ThH, cycles/min.), the obtained results for S_1 versus S_2 and S_3 , respectively S_2 to S_3 , there were found out indeed significant differences at $p < 0.001$ in all cases. The body temperature certainly increased, generally from 37.38 (RSH) and 37.44 (ThH) °C to 39.20 (RSH), respectively 39.16 (ThH) °C, situation in which the statistic maintained the same level of signification. The GOT activities value were 289.03 and 274.60 U/L in S_1 , than it increased significantly ($p < 0.01$) to 367.33 and 376.20 U/L in S_2 , and to 416.33, respectively 409.70 U/L in S_3 . The $S_1 - S_3$ GOT changes were assured at $p < 0.001$. The GPT values increased generally from 11.30 to 14.92 U/L from S_1 to S_3 . For both breeds CPK S_1 values were higher than the references: 123.00 and 121.70 U/L, in S_2 increased upper than 150.00 U/L ($p < 0.01$ RSH and $p < 0.001$ ThH), and in S_3 upper than 170.00 U/L ($p < 0.01$). Certainly results an $S_1 - S_3$ report with $p < 0.001$ level of signification for RSH and ThH as well.

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